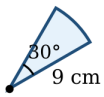
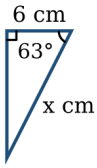
Day 216	A Tier 10-a-day
1 Solve $x^2 + 8x - 3 = 0$ by completing the square. Give your answers in surd form.	
2 The number of students in a school was 200 and is now 140. Work out the percentage decrease.	
3 The diagram shows a sector of a circle of radius 9 cm. Work out the area of the sector. Give your answer in terms of π. The diagram is not drawn accurately. 	
4 y is directly proportional to the cube of x. When x = 3, y = 189. (a) Find a formula for y in terms of x. (b) Work out the value of y when x = 8.	
5 A swimming pool holds 6 m^3 of water. How many litres is this?	

Day 216	A Tier 10-a-day
6 Work out the value of x. (Calculator) Give your answer to 3 significant figures. The diagram is not drawn accurately.  	
7 Write $0.40\dot{2}\dot{2}$ as a fraction in its simplest form.	
8 There are 30 students in a class. 16 students do tennis and 11 students do badminton. 5 students do neither. (a) Work out how many students do both. (b) One student is chosen at random. Find the probability that they do tennis only.	
9 Make x the subject of $y = \frac{3x + 2}{x + 6}$	
10 Rationalise the denominator of $\frac{16}{4\sqrt{3}}$ Give your answer in its simplest form.	